Random Sampling – Biased versus Un-Biased Samples

**Unbiased Samples (this is what we want!!!!)**

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| --- | --- |
| **Method** | **Example** |
| Each item or person in the population is a likely to be chosen as any other |  |
| Items or people are selected according to a time or interval |  |

**Biased Samples (this is what we DON’T want!!!)**

|  |  |
| --- | --- |
| **Method** | **Example** |
| A convenience sample – just using people that are easily accessed |  |
| Voluntary response – making a sample out of those people who choose to participate |  |

When looking over scenarios, these are the questions you need to ask yourself:

* Who was surveyed?
* What were they asked?
* What kind of sampling method was used?
* Does this sampling produce unbiased results?
* Is the conclusion valid?

**Table Examples to Discuss – Will the sample produce valid results? Why or Why not?**

1. Zach is trying to decide which of three golf courses in the area is the best, so he randomly surveyed people at a sports store.

2. To find how much money the average American family spends to cool their home, 100 Alaskan families are surveyed at random.

3. To determine whether students at Southern Middle School will attend an art festival, Ms. Cornette surveys the students in the art club.

4. To evaluate the quality of their product, a manufacturer of cell phones checks every 50th phone off the assembly line.

5. A magazine asks its readers to complete and return a questionnaire about popular television actors.